**FORM PTO-1449** (Rev. 2-32)

**U.S. Department of Commerce Patent and Trademark Office** 

**INFORMATION DISCLOSURE** 

STATEMENT BY APPLICANT

(Use several sheets if necessary)

Atty. Docket No. Serial No.

00-713-i8

REC 59/4.07

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**TECH CENTER 1600/2900** Applicant:

Chad A. Mirkin, et al.

Filing Date:

Group:

October 10, 2001

1637

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
M	1.	4,996,143	02/26/91	Heller, et al.	435	6	04/13/90
	2.	5,508,164	04/16/96	Kausch, et al.	435	6	10/29/93
	3.	5,922,537	07/13/99	Ewart, et al.	435	6	11/8/96
	4.	5,972,615	10/26/99	An, et al.	435	6	01/21/98
	5.	6,264,825	07/24/01	Blackburn, et al.	205	777.5	06/23/99
M	6.	6,214,560	04/10/01	Yguerabide, et al.	435	7.1	04/18/97

**FOREIGN PATENT DOCUMENTS Translation** Class **Subclass Document Number** Date Country Yes No 7. WO 94/29484 12/22/94 PCT **PCT** 8. 05/04/00 WO 00/25136

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).					
y	9.	Mohanty J., et al. "Pulsed laser excitation of phosphate stabilized silver nanoparticles," <i>Proc. Indian Acd. Sci.</i> , Vol. 112, No. 1, p. 63-72.			
M	10.	Peńa-Nicewarner S., et al., "Hybridization and Enzymatic Extension of Au Nanoparticle-Bound Oligonucleotides," <i>J. Am. Chem. Soc.</i> , Vol. 124, p. 7314-7323 (2002)			
M	11.	Whitesides G.M., et al., "Soft Lithography in Biology and Biochemistry," <i>Annu. Rev. Biomed. Eng.</i> , p. 335-373 (2001)			

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Serial No.

Sheet 1 of 3

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TECH CENTER 1600/2900

Applicant

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U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
4	1.	5,830,986	11/03/98	Merrill, et al.	528	332	10/28/96
	2.	5,900,481	05/04/99	Lough, et al.	536	55.3	11/06/96
	3.	6,203,989	03/20/01	Goldberg, et al	435	6	03/25/99
	4.	6,251,303	06/26/01	Bawendi, et al.	252	301.4R	09/18/98
	5.	6,277,489	08/21/01	Abbott, et al.	428	403	12/04/98
	6.	6,306,610	10/23/01	Bawendi, et al.	435	7.1	09/17/99
	7.	6,361,944	03/26/02	Mirkin, et al.	435	6	06/25/99
	8.	6,365,418	04/02/02	Wagner, et al.	436	518	05/18/00
Pa	9.	6,417,340	07/09/02	Mirkin, et al.	536	23.1	10/20/00

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	slation No
a	10.	W0 93/25709	23 December 1993	PCT			
	·11.	WO 98/04740	5 February 1998	PCT			
	12.	WO 98/17317	30 April 1998	PCT			
	13.	WO 99/60169	25 November 1999	PCT			
	14.	W0 00/33079	8 June 2002	PCT			
M	15.	WO 01/00876	4 January 2001	PCT			

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**FORM PTO-1449 U.S. Department of Commerce** Atty. Docket No. Serial No. (Rev. 2-32) **Patent and Trademark Office** 00-713-i8 09/974,007 RECEIVED **INFORMATION DISCLOSURE** STATEMENT BY APPLICANT JUL 0 9 2003 (Use several sheets if necessary) Applicant: TECH CENTER 1600/2900 Chad A. Mirkin, et al.

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Sheet 2 of 3

**U.S. PATENT DOCUMENTS Filing** Examiner Date if Initial Document Number Date Name Class Subclass **Appropriate** 

FOREIGN PATENT DOCUMENTS Translation **Document Number Date** Country Subclass Class Yes No On 16. WO 01/51665 19 July 2001 **PCT** 17. WO 01/73123 4 October 2001 **PCT** 18. WO 01/86301 15 November 2001 **PCT** 19. WO 02/04681 17 January 2002 **PCT** 20. WO 02/18643 7 March 2002 **PCT** 21. WO 02/36169 10 May 2002 **PCT** 22. WO 02/46483 13 June 2002 PCT 23. WO 02/46472 13 June 2002 **PCT** 

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc). 24. Letsinger, R., et al., "Chemistry of Oligonucleotide-Gold Nanoparticle Conjugates," Phosphorus, Sulfur and Silicon, Volume 144, p. 359-362 (1999) 25. Letsinger, R., et al., "Use of a Steroid Cyclic Disulfide Anchor in Constructing Gold Nanoparticle—Oligonucleotide Conjugates," Bioconjugate Chem, p. 289-291 (2000)

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MCDONNELL BOEHNEN HULBERT & BERGHOFF 300 SOUTH WACKER DRIVE CHICAGO, ILLINOIS 60608

**FORM PTO-1449** Sheet 3 of 3 **U.S. Department of Commerce** (Rev. 2-32) Atty. Docket No. Patent and Trademark Office Serial No. 00-713-i8 09/974,007 INFORMATION DISCLOSURE STATEMENT BY APPLICANT RECEIVED (Use several sheets if necessary) **0 9** 2003 Applicant: TECH CENTER 1600/2900 **Filing Date:** Group: October 10, 2001

**U.S. PATENT DOCUMENTS Examiner** Initial Filing Document Number Date Date if Name Class Subclass **Appropriate** 

1637

FOREIGN PATENT DOCUMENTS Document Number Date **Translation** Country Class Subclass Yes

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc). Li Z:, et al., "Multiple thiol-anchor capped DNA-gold nanoparticle conjugates," Nucleic Acids Research, Volume 30, p. 1558-26. Nuzzo R., et al., "Spontaneously Organized Molecular Assemblies. 3. Preparation and Properties of Solution Adsorbed 27. Monolayers of Organic Disulfides on Gold Surfaces, " J. Am Chem. Soc., Volume 109, p. 2358-2368 (1987) Otsuka, H., et al., "Quantitative and Reversible Lectin-Induced Association of Gold Nonoparticles Modified with D-LactosyHJ-28. mercapto-poly(ethyleneglycol)," J. Am Chem. Soc., Volume 123, p. 8226-8230 (2001) 29. Wuelfing, P., et al., "Nanometer Gold Clusters Protected by Surface-Bound Monolayers of Thiolated Poly(ethylene glycol) Polymer Electrolyte," J. Am Chem. Soc., Volume 120, p. 12696-12697 (1998)

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